UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,103	09/16/2003	John D. Reed	CS23599RL	1627

20280   7590   07/16/2008

MOTOROLA INC
600 NORTH US HIGHWAY 45
W4 - 39Q
LIBERTYVILLE, IL 60048-5343

EXAMINER
DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
2618	

NOTIFICATION DATE	DELIVERY MODE
07/16/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DOCKETING.LIBERTYVILLE@MOTOROLA.COM
ADB035@Motorola.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7 and 12-20* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1,3-7 and 12-20* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *30 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
      Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
      Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments, see remarks filed April 1, 2008 with respect to the

rejection(s) of claim(s) 1, 12, 16 under 35 U.S.C. 103(a) have been fully considered and

are persuasive. Therefore, the rejection has been withdrawn. However, upon further

consideration, a new ground(s) of rejection is made in view of newly cited prior art Chen

et al. (US 2002/0142791).

Chen, which also teaches power control in a CDMA system, teaches

determining, by a mobile station, a communication channel variance condition, wherein

the communication channel variance condition is at least one of a primary pilot power

variance, fading period and fade depth estimate, or a peak-to-average estimate within

an adaptive measurement interval (Section 0025 lines 14 – 25). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify

the power control system of Gholmieh with the open loop power control of Chen as

typical CDMA systems comprise closed loop and open loop power control.

Examiner respectfully disagrees with Applicants' assertion that Gholmieh doe not

teach "establishing, by the mobile station, a headroom value based on the

communication channel variance condition". The headroom of the mobile station

increases/decreases based on the power control commands. The power control

commands are created as a result of channel variance conditions such as changes in

link quality thus the headroom is ultimately based on changes in link quality.

Examiner respectfully disagrees with Applicants' assertion that Holma does not

teach as stated in the Page 6, 4th Paragraph of the Remarks "at least one of a primary

pilot power variance, fading period ....". Holma, as detailed in the Office Action dated

January 3, 2008, clearly teaches wherein the change in the SIR is based on changes in

the pilot power (See Cols. 8 lines 56 - 64, 9 lines 37 - 67).

Examiner respectfully disagrees with Applicants' assertion on Page 7, 1st

Paragraph "Thus, Gholmieh does not show or suggest the mobile station determines a

maximum data rate ...". Sections 0010 and 0036 show that the headroom of the mobile

station dictates the maximum data rate that said mobile station can transmit thus

Gholmieh reads on the limitation in question.

Examiner respectfully disagrees with Applicants' assertion on Page 7, 2nd

Paragraph "Thus, Gholmieh does not show or suggest the mobile station determines a

... sending a rate adjustment ..." for the same reasons set forth above. Furthermore

Gholmieh teaches Dedicated Rate Control (See Section 0010) which comprises mobile

stations sending requests for rate increases.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 3 - 4, 7, 12 – 14, 16 – 18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Gholmieh et al. (US 2004/0147276) in view of Chen et al. (US

2002/0142791)

Regarding Claim 1, Gholmieh teaches a method for establishing headroom to

provide margin in determining available transmit power value for a mobile station

operating in a wireless communication system comprising the steps of: establishing, by

the mobile station, a headroom value based on the communication channel variance

condition (Sections 0009 lines 1 – 9, 0021 lines 3 – 7, 0023, 0026 – 0028, See

Response To Arguments above).

Gholmieh does not teach determining, by the mobile station, a communication

channel variance condition, wherein the communication channel variance condition is

at least one of a primary pilot power variance, fading period and fade depth estimate,

or a peak-to-average estimate within an adaptive measurement interval.

Chen, which also teaches power control in a CDMA system, teaches

determining, by a mobile station, a communication channel variance condition, wherein

the communication channel variance condition is at least one of a primary pilot power

variance, fading period and fade depth estimate, or a peak-to-average estimate within

an adaptive measurement interval (Section 0025 lines 14 – 25).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the power control system of Gholmieh with the open loop

power control of Chen as typical CDMA systems comprise closed loop and open loop

power control.

Regarding Claim 12, Gholmieh teaches a mobile station comprising: means for
establishing, by the mobile station, a headroom value based on the communication
channel variance condition (Sections 0009 lines 1 – 9, 0021 lines 3 – 7, 0023, 0026 –
0028, See Response To Arguments above).

Gholmieh does not teach means for determining, by the mobile station, a
communication channel variance condition, wherein the communication channel
variance condition is at least one of a primary pilot power variance, fading period and
fade depth estimate, or a peak-to-average estimate within an adaptive measurement
interval.

Chen, which also teaches power control in a CDMA system, teaches means for
determining, by the mobile station, a communication channel variance condition,
wherein the communication channel variance condition is at least one of a primary pilot
power variance, fading period and fade depth estimate, or a peak-to-average estimate
within an adaptive measurement interval (Section 0025 lines 14 – 25).

It would have been obvious to one of ordinary skill in the art at the time the
invention was made to modify the power control system of Gholmieh with the open loop
power control of Chen as typical CDMA systems comprise closed loop and open loop
power control.

Regarding Claim 16, Gholmieh teaches a wireless communication system
comprising: a base station; at least one mobile station (Figure 1); and means for
establishing, by at least one mobile station, a headroom value based on the

communication channel variance condition (Sections 0009 lines 1 – 9, 0021 lines 3 – 7, 0023, 0026 – 0028).

Gholmieh does not teach means for determining, by the at least one mobile station, a communication channel variance condition, wherein the communication channel variance condition is at least one of a primary pilot power variance, fading period and fade depth estimate, or a peak-to-average estimate within an adaptive measurement interval.

Chen, which also teaches power control in a CDMA system, teaches means for determining, by the at least one mobile station, a communication channel variance condition, wherein the communication channel variance condition is at least one of a primary pilot power variance, fading period and fade depth estimate, or a peak-to-average estimate within an adaptive measurement interval (Section 0025 lines 14 – 25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the power control system of Gholmieh with the open loop power control of Chen as typical CDMA systems comprise closed loop and open loop power control.

Regarding Claims 3, 13, Gholmieh in view of Chen teaches all of the claimed limitations recited in Claims 1, 12. Gholmieh further teaches wherein the mobile station determines a maximum data rate based on the headroom value (Sections 0010, 0036) and sends the maximum data rate to a base station (Sections 0010, 0036).

Regarding Claims 4, 14, Gholmieh in view of Chen teaches all of the claimed

limitations recited in Claims 1, 12. Gholmieh further teaches wherein the mobile station

determines a maximum data rate based on the headroom value (Sections 0010, 0036)

and sends a rate adjustment request to a base station (Section 0010).

Regarding Claim 7, Gholmieh in view of Chen teaches all of the claimed

limitations recited in Claim 1. Chen further teaches wherein determining a

communication channel variance condition includes measuring a variance in a primary

pilot power (Section 0025 lines 14 – 25).

Regarding Claim 17, Gholmieh in view of Chen teaches all of the claimed

limitations recited in Claim 16. Gholmieh further teaches means for determining a data

rate based on the headroom value (Sections 0010, 0036).

Regarding Claim 18, Gholmieh in view of Chen teaches all of the claimed

limitations recited in Claim 17. Gholmieh further teaches means for sending the data

rate between the base station and said at least one mobile station (Figure 1, Sections

0010, 0036).

4.   Claims 5 – 6, 15, 19 – 20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Gholmieh et al. (US 2004/0147276) in view of in view of Chen et al.

(US 2002/0142791), as applied to Claims 1, 12, 16 above, and further in view of

Corazza (US 6,563,810).

Regarding Claims 5, 15, 19, Gholmieh in view of Holma teaches all of the

claimed limitations recited in Claims 1, 12, 16. Gholmieh in view of Chen does not

teach detecting a battery condition of the mobile station; and modifying the headroom value based on the battery condition.

Corazza teaches detecting a battery condition of the mobile station; and modifying the headroom value based on the battery condition (Col. 6 lines 30 – 51, the headroom value, R sub Step2, is dependent on the maximum transmit power, which is dependent on the amount of battery energy, the headroom value is thus dependent on said battery energy by virtue of it's dependence on the maximum transmit power).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Gholmieh in view of Chen with headroom adjustment method of Corazza for the purpose providing an alternative means of determining a maximum data rate.

Regarding Claim 6, Gholmieh in view of Chen and in further view of Corazza teaches all of the claimed limitations recited in Claim 5. Corazza further teaches determining if the battery condition relates to a low battery level; and if the battery condition relates to a low battery level, increasing the headroom value (Col. 6 lines 30 – 51, the headroom value, R sub Step2, is dependent on the maximum transmit power, which is dependent on the amount of battery energy, the headroom value is thus dependent on said battery energy by virtue of it's dependence on the maximum transmit power).

Regarding Claim 20, Gholmieh in view of Chen and in further view of Corazza teaches all of the claimed limitations recited in Claim 19. Gholmieh further teaches means for determining a data rate based on the headroom value (Sections 0010, 0036);

and means for sending the data rate between the base station and said at least one

mobile station (Figure 1, Sections 0010, 0036).

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to RAYMOND S. DEAN whose telephone number is

(571)272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Raymond S Dean/   Raymond S. Dean
Primary Examiner, Art Unit 2618   July 8, 2008